

The Effects of Production Inputs, Technical Efficiency and Other Factors on Jasmine and Non-Jasmine Rice Yields in Thailand

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Both jasmine and non-jasmine rice yields in Thailand are substantially lower than average world rice yields. Sources of yield variations in both kinds of rice, i.e., production inputs, technical efficiency and other factors are investigated in this study. Factors affecting technical inefficiency are also analyzed simultaneously with production frontiers estimated using maximum likelihood (Frontier 4.1) computer program. Transcendental logarithmic (translog) and Cobb-Douglas stochastic production frontiers are used. The Cobb-Douglas frontier is selected for policy implications. The crucial factors influencing jasmine rice yield are technical efficiency, chemical fertilizer, labor, irrigation, severe drought and neck blast whereas those for the non-jasmine rice are the same except labor and neck blast are not significant. Factors negatively affecting technical inefficiency for non-jasmine are male labor to total labor ratio and experience reflected by age while labor influences in the positive direction. For the jasmine rice, only one variable, i.e., male-labor to total labor ratio, influences technical inefficiency significantly